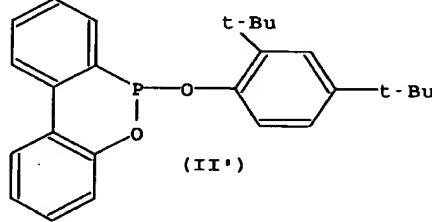


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<p>97-532722/49 E17 (EII) MITSUBISHI CHEM CORP 96.03.28 96JP-074000 (97.09.30) C07C 47/02, B01J 31/04, 31/22, 31/28, 31/30, C07C 45/50 // C07B 61/00</p> <p>High selectivity production of aldehyde(s) using hydroformylation reaction - comprises reacting olefin(s) with carbon monoxide and hydrogen in presence of catalysts containing metals of group eight and cyclic phosphonite compounds</p> <p>C97-169996</p>	<p>MITU 96.03.28 *JP 09255610-A</p>	<p>E(10-DIC) N(2, 5-D, 5-EI)</p>
<p>Production of aldehydes (I) using a hydroformylation reaction comprises reacting olefin compounds with carbon monoxide and hydrogen in the presence of catalysts containing metals of the eighth group, and tri-valent organic phosphorus compound of cyclic phosphonite compounds.</p> <p>MORE SPECIFICALLY The cyclic phosphonite compounds are e.g. of formula (IIa) or (IIb).</p>	<p>X₂, Y₂ = optionally substituted di-valent hydrocarbon group; Q₂, Q₃ = optionally substituted methylene; m, n = 0, 1 or more; and X₃, Y₃, Z₂, Z₃ = optionally substituted hydrocarbon group.</p>	<p>ADVANTAGE (I) can be prepared with high selectivity and less reduction of the olefin compounds.</p> <p>PREFERRED MATERIALS The olefin compounds are ethylene, propylene, butene, butadiene, JP 09255610-A+</p>

<p>and/or pentene. The group 8 metal is Rh.</p> <p>EXAMPLE Propylene (4.50 g) was reacted with H₂/CO gas at 70 °C for 10.0 hours in the presence of carbonyl complex compound of formula (IV) (39.4 g), and phosphonite compound of formula (II') (1.0 mole per mole of Rh) to give 100% aldehyde. (MHG)</p> <p>[Rh(OAc)(COD)]₂ (IV)</p> <p>COD = cyclooctadiene.</p>	 <p>(15pp062DwgNo.0/0)</p> <p>JP 09255610-A</p>
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